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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,093	10/06/2003	Isao Ota	111398.01	4464
25944	7590	07/31/2006	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			MARCHESCHI, MICHAEL A	
			ART UNIT	PAPER NUMBER

1755

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/678,093

Applicant(s)

OTA ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/980685.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/22/06 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the specific cerium salt, specific molar ratios and specific processing conditions, as recited in sections [0013], [0033] and [0040]-[0042], for the processing of the modified cerium oxide (last 4 lines of claim 1), does not reasonably provide enablement for enabling for all cerium salts, molar ratios and processing conditions for the processing of the modified cerium oxide. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

The claims encompasses any of such parameters. However, the specification only teaches the use of specific parameters. Such a limited disclosure does not support the breadth of the instant claims.

Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) obvious over Kasai et al. (343) alone or in view of Yoshida et al. (118) and Khaladji et al. (697)

Kasai et al. (343) teach in column 6, lines 35-45, column 8, lines 28-64, column 9, lines 16-25, column 12, line 32 and the claims, a surface modified cerium (IV) oxide abrasive stable slurry (having the claimed concentration) for polishing a glass substrate which comprises cerium (IV) oxide (this is produced using the method defined in the reference) have the claimed size and surface area. The claims define the added limitations of how the oxide is produced.

Yoshida et al. (118) teaches in the abstract and column 6, line 42 that ceria polishing slurries are known to be used to polish magnetic discs. Column 6, line 31 and line 42 equates polishing semiconductors or magnetic glass discs with the ceria slurry.

Khaladji et al. teaches in the abstract and column 2, lines 42-44 that in ceria polishing slurries, it is advantageous to use a high purity starting material (cerium salt-this in turn will result in a highly pure cerium oxide).

Kasai et al. teaches polishing glass substrates (reads on the claimed material) with a surface modified cerium oxide abrasive slurry (claimed concentration of cerium oxide) by using cerium oxide having claimed size and surface area. In view of this, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976). Although the limitation “glass hard disc platter” is not literally defined by this reference, the reference states that the

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composition is used to polish inorganic glass and quartz glass (column 9, lines 19-25) and it is the examiners position that this broadly reads on a “glass hard disc platter” since applicants do not show otherwise. Assuming arguendo, the reference clearly states that glass articles can be polished with the composition and one skilled in the art would have appreciated this to include any glass article, including the claimed one. In the alternative, the use of the ceria polishing slurry according to Kasai et al. to polish magnetic discs would have been obvious to the skilled artisan motivated by Yoshida et al. teaching that ceria polishing slurries are known to be used to polish magnetic discs and this reference equates polishing semiconductors and magnetic glass discs with the ceria slurry. In view of this, Yoshida clearly implies that either substrate can be polished with a ceria slurry. The instant specification does not literally define what is meant by a “glass hard disc platter”, however, the specification refers to magnetic disc, thus it can be reasonably presumed that a glass hard disc platter is a glass magnetic disc absent evidence to the contrary.

Although the claimed ratio is not literally defined, it is the examiners position that since no other rare earth materials are defined as being present and/or no other rare earth is used in the process to make the cerium oxide, the amount of cerium oxide present is indirectly implied to be within the claimed range and applicants have not shown otherwise. In the alternative, the use of the ceria having a high purity (this implies that only cerium is present and no other oxides) would have been obvious to the skilled artisan motivated by Khaladji et al. teaching that it is advantageous to use a high purity starting material (cerium salt) when making ceria for polishing slurries. Although the purity is not defined for the ceria product, it can be reasonably presumed that the use of a highly pure starting material (cerium salt) will result in a highly pure cerium

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oxide (i.e. one that does not contain other rare earth oxide since the starting material is pure). In addition, a highly pure material will minimize the introduction of impurities (material other than cerium) during polishing, thus protecting the polished surface from said impurities which could adversely effect the polished surface.

Applicant's arguments filed 6/22/06 have been fully considered but they are not persuasive.

The rejections based on (1) Ota et al., (2) Yoshida et al. (118), (3) Kido et al., (4) Matsuzawa et al., (5) Yoshida et al. (976) and (6) Homma et al., alone, as the primary reference, are withdrawn because the references fail to teach the use of a surface modified cerium oxide.

Before arguing the sole reference, applicants states the instant specification (comparative example 1 coupled with the instant examples), discloses benefits for the claimed ratio. This is not persuasive because the comparative example only is based on a cerium oxide content of 57% which is much lower than the claimed lower limit thus the example is not commensurate in scope with the claims and does not clearly show criticality the claimed ratio.

Applicants argue that Kasai et al. does not teach polishing glass hard disc platter. Although the limitation "glass hard disc platter" is not literally defined by this reference, the reference states that the composition is used to polish inorganic glass and quartz glass (column 9, lines 19-25) and it is the examiners position that this broadly reads on a "glass hard disc platter" since applicants do not show otherwise. Assuming arguendo, the reference clearly states that glass articles can be polished with the composition and one skilled in the art would have appreciated this to include any glass article, including the claimed one.

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Applicants also argue the claimed ratio as not being defined by this reference. Although not literally defined, it is the examiners position that since no other rare earth materials are defined as being present and/or no other rare earth is used in the process to make the cerium oxide, the amount of cerium oxide present is indirectly implied to be within the claimed range and applicants have not shown otherwise. In addition, applicants argue the comparative example defined in the instant specification but fail to establish any relationship between the commercially available cerium oxide of the comparative example and the reference cerium oxide. Is the cerium oxide of the comparative example the same as the reference cerium oxide? Finally, since no correlation is made, applicants have not compared the claimed invention with the reference teachings.

In as much as Yoshida et al. has been applied as a secondary reference, any argument that this reference does not teach a glass hard disc platter is not persuasive because the reference teaches that glass magnetic discs can be polished and the instant specification does not literally define what is meant by a "glass hard disc platter". The specification, however, refers to magnetic disc, thus it can be reasonably presumed that a glass hard disc platter is a glass magnetic disc absent evidence to the contrary.

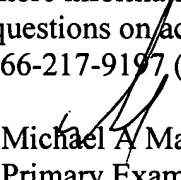
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/06  
MM

  
Michael A. Marcheschi  
Primary Examiner  
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